

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference CHATA-100PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/12229	International filing date (day/month/year) 06 MAY 2000	Priority date (day/month/year) 08 MAY 1999
International Patent Classification (IPC) or national classification and IPC IPC(7): B67D 5/52, 5/60; B65B 43/50 and US Cl.: 222/1, 135, 144, 144.5, 168; 141/104		
Applicant NEAS, EDWIN D.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

I ☒ Basis of the report

II ☐ Priority

III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability

IV ☐ Lack of unity of invention

V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement

VI ☐ Certain documents cited

VII ☒ Certain defects in the international application

VIII ☐ Certain observations on the international application

Date of submission of the demand 07 DECEMBER 2000	Date of completion of this report 10 AUGUST 2001
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer CHARLES E. COOLEY <i>Charles E. Cooley</i>
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Form PCT/IPEA/409 (cover sheet) (July 1998)\*

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/12229

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:
- pages 1-9, as originally filed
- pages NONE, filed with the demand
- pages NONE, filed with the letter of \_\_\_\_\_

- ☒ the claims:
- pages 10-13, as originally filed
- pages NONE, as amended (together with any statement) under Article 19
- pages NONE, filed with the demand
- pages NONE, filed with the letter of \_\_\_\_\_

- ☒ the drawings:
- pages 1-11, as originally filed
- pages NONE, filed with the demand
- pages NONE, filed with the letter of \_\_\_\_\_

- ☒ the sequence listing part of the description:
- pages NONE, as originally filed
- pages NONE, filed with the demand
- pages NONE, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\*Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

Form PCT/IPEA/409 (Box I) (July 1998) \*

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. statement**

Novelty (N)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO
Inventive Step (IS)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO
Industrial Applicability (IA)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO

**2. citations and explanations (Rule 70.7)**

Claims 1-3, 6, 13-14, 16-19, and 21 lack novelty under PCT Article 33(2) as being anticipated by HELLENBERG '211.  
See Figs. 1-2 and Cols. 3-6.

Claims 1-3, 6, 13-14, 16-19, and 21 lack novelty under PCT Article 33(2) as being anticipated by HELLENBERG '302.  
See Figs. 1-6 and Cols. 4-16.

Claims 9, 10, and 12 lack an inventive step under PCT Article 33(3) as being obvious over HELLENBERG '302 in view of FALCOFF et al.

HELLENBERG '302 discloses the recited subject matter substantially as claimed but does not disclose the recited mixer. FALCOFF et al. discloses an apparatus for preparing a mixture including vessels 7-12 for dispensing a fluent substance into a receptacle 13 and a mixer 14 disposed in a positional relationship with the receptacle 13. To have provided the apparatus of HELLENBERG '302 with a mixer disposed in a positional relationship with the receptacle into which the fluent substances are dispensed as disclosed by FALCOFF et al. for the purpose of providing sufficient mixing of each batch of material would not have involved an inventive step (Col. 3, lines 55-65).

Claims 9 and 10 lack an inventive step under PCT Article 33(3) as being obvious over HELLENBERG '211 in view of FALCOFF et al.

HELLENBERG '211 discloses the recited subject matter substantially as claimed but does not disclose the recited mixer. FALCOFF et al. discloses an apparatus for preparing a mixture including vessels 7-12 for dispensing a fluent substance into a receptacle 13 and a mixer 14 disposed in a positional relationship with the receptacle 13. To have provided the apparatus of HELLENBERG '211 with a mixer disposed in a positional relationship with the receptacle into which the fluent substances are dispensed as disclosed by FALCOFF et al. for the purpose of providing sufficient mixing of each batch of material would not have involved an inventive step (Col. 3, lines 55-65).

(Continued on Supplemental Sheet.)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 12 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof:  
Claim 12, line 2: replace "does" with --dose--.

Form PCT/IPEA/409 (Box VII) (July 1998)\*

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

## V. 1. REASONED STATEMENTS:

The report as to Novelty was positive (YES) with respect to claims 4, 5, 7-12, 15, and 20.

The report as to Novelty was negative (NO) with respect to claims 1-3, 6, 13-14, 16-19, and 21.

The report as to Inventive Step was positive (YES) with respect to claims 4, 5, 7-8, 11, 15, and 20.

The report as to Inventive Step was negative (NO) with respect to claims 1-3, 6, 9, 10, 12-14, 16-19, and 21.

The report as to Industrial Applicability was positive (YES) with respect to claims 1-21.

The report as to Industrial Applicability was negative (NO) with respect to claims NONE.

## V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

Claims 4, 5, 7, 8, 11, 15, and 20 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the recited check valve, vessel configuration, piston chamber, titration module and mixer, the step of titrating the fluent substances to balance the pH thereof, or the step of inserting a pH probe into the fluent substances and adding pH solution as directed. The invention has industrial applicability such as in the dispensing and preparation of liquid substances such as reagents, solvents, pesticides, paints, beverages, etc.

----- NEW CITATIONS -----

NONE

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CHATA-100PCT	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US00/12229	International filing date (day/month/year) 06 MAY 2000	(Earliest) Priority Date (day/month/year) 08 MAY 1999
Applicant NEAS, EDWIN D.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 3

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

Form PCT/ISA/210 (first sheet) (July 1998)\*

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/12229

## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The abstract is too long (PCT Rule 8.1(b)). The abstract must be less than 150 words, or 200 words when no Figure is to be published.

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

## NEW ABSTRACT

An apparatus and method of preparing a mixture using a computerized apparatus having a plurality of vessels (34a-34f), each of which is arranged on a support structure and oriented for dispensing a fluent substance through at least one exit port and a first flow channel (74a, 74c). Each first flow channel is in further communication with a dedicated measurement assembly (64a-64f), for dosing fluent substance so dispensed, and a second flow channel (66a-66g). The apparatus also includes a receptacle support (43); and can further incorporate a user interface (16) for receiving a first input concerning the mixture plus a storage device to hold instructions for locating a respective one of the second flow channels and the receptacle support in operative relation. The apparatus can further comprise titration and mixing modules or a support structure having a framework coupled to a sustaining member for accommodating flexible-walled vessels.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/12229

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :B67D 5/52, 5/60; B65B 43/50

US CL :222/1, 135, 144, 144.5, 168; 141/104

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 222/1, 132, 135, 137, 144, 144.5, 168, 168.5; 141/100, 101, 104, 144, 145, 146; 366/152.1, 152.2, 160.1-160.5, 182.2, 183.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONEElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
NONE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,474,211 A (HELLENBERG) 12 December 1995, see entire document.	1-3, 6, 13-14, 16-19, and 21
X	US 5,078,302 A (HELLENBERG) 07 January 1992, see entire document.	1-3, 6, 13-14, 16-19, and 21
X	US 5,119,973 A (MILLER et al.) 09 June 1992, see entire document.	21
Y	US 4,403,866 A (FALCOFF et al.) 13 September 1983, see Fig. 1 and col. 3, lines 55-65.	9, 10, and 12
A	US 3,122,272 A (MARSH) 25 February 1964, see Figures 1-2.	1-21

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

23 AUGUST 2000

Date of mailing of the international search report

06 SEP 2000

Name and mailing address of the ISA/US  
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Form PCT/ISA/210 (second sheet) (July 1998)\*



## INTERNATIONAL SEARCH REPORT

International application No.  
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,258,759 A (ACHEN) 31 March 1981, see Figure 1.	1-21
A	US 4,676,286 A (AIUOLA et al.) 30 June 1987, see Figures 1-3.	1-21
A	US 4,946,100 A (FLEMMING et al.) 07 August 1990, see Figures 3 and 5.	1-21

Form PCT/ISA/210 (continuation of second sheet) (July 1998)\*